WHAT IS CLAIMED IS:

1. A lithographic apparatus comprising:

an illumination system constructed to provide a beam of radiation;

an article support structure constructed to support an article to be placed in a beam path of said beam of radiation on said article support structure;

a backfill gas feed arranged in said article support structure to feed backfill gas to a backside of said article at a backfill gas pressure when said article is supported by said article support structure;

an electrostatic clamp structured to clamp said article against said article support structure during projection; and

a controller structured to control at least one of said clamp and said backfill gas pressure to release said article from said article support structure by use of said backfill gas pressure.

2. A lithographic apparatus according to claim 1, wherein

said at least one of said clamp and said backfill gas pressure is both said clamp and said backfill gas pressure, and said controller releases said clamp prior to reducing said backfill gas feed pressure.

3. A lithographic projection apparatus according to claim 1, further comprising:

a presence detector structured to detect a presence of said article on said article support structure, and said controller controls said backfill gas feed pressure relative to a presence detection measured by said presence detector.

4. A lithographic projection apparatus according to claim 3, wherein said presence detector includes an electrostatic clamp capacity detector that is coupled to said clamp.

5. A lithographic projection apparatus according to claim 1, further comprising:

an article handler structured to handle said article during placement or removal

of said article with respect to said article support structure, said article handler constructed to provide a releasing force to release said article handled from said article support structure,

said controller structured to control said backfill gas pressure relative to at least one of a measured displacement of said article measured by a displacement sensor and a releasing force of said article handler measured by a force sensor.

6. A lithographic projection apparatus according to claim 1, wherein said backfill gas pressure is in a range of 1-15 mbar.

7. A lithographic projection apparatus according to claim 1, wherein said electrostatic clamp defines a backfill gas gap that is below 15 mu.

8. A lithographic apparatus according to claim 1, wherein

said article support structure is structured to support a patterning device, said patterning device serving to impart a cross-section of said beam of radiation with a pattern.

9. A lithographic apparatus according to claim 1, wherein

said article support structure is a substrate table for holding a substrate to be patterned by a patterned beam onto a target portion of said substrate.

10. A method of manufacturing a device, comprising:

providing a substrate;

providing a beam of radiation;

using a patterning device to impart a cross-section of the beam of radiation with a pattern;

providing an article support to support at least one of the substrate and the patterning device;

projecting the patterned beam of radiation onto a target portion of the substrate;

supplying backfill gas to the article support at a pressure; and

unloading at least one of the substrate and the patterning device from the article support by using the pressure of the backfill gas.

11. A method according to claim 10, further comprising:

providing a clamping force for clamping at least one of the substrate and patterning device during projection of the patterned beam;

providing the pressure of the backfill gas prior to projection for providing an improved thermal conduction between the article and the article support; and

releasing the clamping force after projection to unload at least one of the substrate and the patterning device from the article support by use of the pressure of the backfill gas.

12. A method according to claim 11, further comprising:

pressing the article by an article handler after providing the backfill gas pressure and prior to releasing the clamping force; and

lifting the article by the article handler after releasing the clamping force.

13. A lithographic apparatus comprising:

means for providing a beam of radiation;

means for supporting an article to be placed in a beam path of said beam of radiation;

means for supplying a backfill gas to a backside of said article at a backfill gas pressure when said article is supported by said means for supporting;

means for clamping said article against said means for supporting during projection; and

means for controlling at least one of said means for clamping and said means for supplying a backfill gas to release said article from said means for supporting by use of said backfill gas pressure.

14. A method of supporting an article during a lithographic process, comprising:

supplying a backfill gas to a backside of the article at a backfill gas pressure when the article is supported by an article support structure;

clamping the article against the article support structure during projection of an image onto said article; and

controlling at least one of said supplying and said clamping to release said article by use of said backfill gas pressure.